



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Raanan A. Miller and Markus Zahn

Application No.: 10/082,803

Group Art Unit: 2881

Filed: February 21, 2002

Examiner: Gurzo, Paul M.

Confirmation No.: 4435

Title: LONGITUDINAL FIELD DRIVEN ION MOBILITY FILTER AND
DETECTION SYSTEM

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450	
on <u>1-16-04</u>	<u>Karen Sabia</u>
Date	Signature
<u>KAREN SABIA</u>	
Typed or printed name of person signing certificate	

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Supplemental Information Disclosure Statement is submitted:

☐ under 37 CFR 1.129(a), or

(First/Second submission after Final Rejection)

☐ under 37 CFR 1.97(b), or

(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

☒ under 37 CFR 1.97(c) together with either:

☐ a Statement under 37 CFR 1.97(e), as checked below, or

☒ a \$180.00 fee under 37 CFR 1.17(p), or

(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with:

☐ a Statement under 37 CFR 1.97(e), as checked below, and

☐ a \$180.00 fee under 37 CFR 1.17(p), or

(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

☐ under 37 CFR 1.97(i):

Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.

(Filed after payment of issue fee)

RECEIVED
JAN 22 2004
TECHNOLOGY CENTER 2800

DO 00 081
3081:33 10
00828001 21000000 00000000 0002/12/10

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

☒ Enclosed herewith is form PTO-1449:

☒ Copies of the cited references are enclosed.

☐ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. ☐ , to which priority under 35 U.S.C. 120 is claimed. The earlier application contains copies of the cited references.

☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.

☒ The "concise explanation" requirement (non-English references) for references AM2, AN2, AO2, AP2, AQ2, AL3 under 37 CFR 1.98(a)(3) are satisfied by:

☐ the explanation provided on the attached sheet.

☐ the explanation provided in the Specification.

☐ submission of the enclosed International Search Report.

☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.

☒ the enclosed English language abstract attached to each reference.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's
Initials

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []
____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []
____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

Examiner

Date

- ☐ A copy of each above-cited application, including the current claims, is enclosed.
- ☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

- ☒ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.
- ☐ Please charge Deposit Account 08-0380 in the amount of \$[]. A copy of this Statement is enclosed.
- ☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 

David J. Thibodeau, Jr.
Registration No.: 31,671
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

Dated: 1/16/04

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 3239.1000-017		APPLICATION NO. 10/082,803	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION January 15, 2004 (Use several sheets if necessary)		FIRST NAMED INVENTOR Raanan A. Miller		FILING DATE February 21, 2002	
		EXAMINER Paul M. Gurzo		CONFIRMATION NO. 4435	
				GROUP 2881	

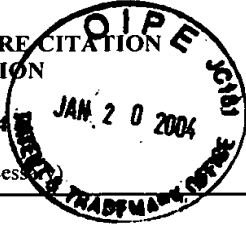
U.S. PATENT DOCUMENTS				
EXAM- INER INI- TIAL	REF. NO.	DOCUMENT NUMBER Number-Kind Code (if known)	ISSUE DATE / PUBLICATION DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT
	AD4	3,931,589	01/06/1976	Aisenberg, <i>et al.</i>
	AE4	4,025,818	05/24/1977	Giguere, <i>et al.</i>
	AF4	4,136,280	01/23/1979	Hunt, <i>et al.</i>
	AG4	4,201,921	05/06/1980	McCorkle
	AH4	5,536,939	07/16/1996	Freidhoff, <i>et al.</i>
	AI4	5,723,861	03/03/1998	Carnahan, <i>et al.</i>
	AJ4	5,789,745	08/04/1998	Martin, <i>et al.</i>
	AK4	5,801,379	09/01/1998	Kouznetsov
	AA5	5,838,003	11/17/1998	Bertsch, <i>et al.</i>
	AB5	5,869,344	02/09/1999	Linforth, <i>et al.</i>
	AC5	5,965,882	10/12/1999	Megerie, <i>et al.</i>
	AD5	6,051,832	04/18/2000	Bradshaw
	AE5	6,066,848	05/23/2000	Kassel, <i>et al.</i>
	AF5	6,107,628	08/22/2000	Smith, <i>et al.</i>
	AG5	6,200,539 B1	03/13/2001	Sherman, <i>et al.</i>
	AH5	6,323,482 B1	11/17/2001	Clemmer, <i>et al.</i>
	AI5	6,509,562 B1	01/21/2003	Yang, <i>et al.</i>
	AJ5	6,618,712 B1	09/09/2003	Parker, <i>et al.</i>
	AK5	2002/0134932 A1	09/26/2002	Guevremont
	AA6	2002/0070338 A1	06/13/2002	Loboda
	AB6	2003/0089847 A1	05/15/2003	Guevremont, <i>et al.</i>
	AC6	5,834,771	10/10/98	Yoon, <i>et al.</i>
	AD6	6,495,823 B1	12/17/2002	Miller, <i>et al.</i>

EXAMINER	DATE CONSIDERED
----------	-----------------

January 15, 2004

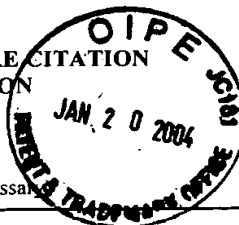
(Use several sheets if necessary)

GROUP
2881

[illegible]

DATE CONSIDERED

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 3239.1000-017		APPLICATION NO. 10/082,803	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION January 15, 2004 (Use several sheets if necessary)		FIRST NAMED INVENTOR Raanan A. Miller		FILING DATE February 21, 2002	
		EXAMINER Paul M. Gurzo		CONFIRMATION NO. 4435	
				GROUP 2881	



OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AU	"Advanced Cross-Enterprise Technology Development for NASA Missions," Revised NASA Research Announcement NRA99-OSS-05 pp. 1-C19 (1999).
AV	Buryakov, <i>et al.</i> , "Drift Spectrometer for the Control of Amine Traces in the Atmosphere," <i>J. Anal. Chem.</i> 48(1):112-121 (1993).
AW	Handy, <i>et al.</i> , "Determination of Nanomolar Levels of Perchlorate in Water by ESI-FAIMS-MS," <i>J. Anal. At. Spectrometry</i> 15:907-911 (2000).
AX	Buryakov, <i>et al.</i> , "Separation of Ions According to Mobility in A Strong AC Electric Field," <i>Letters to Journal of Technical Physics</i> , 17:11-12 (1991).
AY	Guevremont, Roger and Purves, Randy W., "High Field Asymmetric Waveform Ion Mobility Spectrometry-Mass Spectrometry: An Investigation of Leucine Enkephalin Ions Produced by Electrospray Ionization," <i>J. Am. Soc. Mass. Spectrom.</i> 10:492-501 (1999).
AZ	Verenchikov, A.N. <i>et al.</i> , Analysis ions in solutes by gaseous ion analyzer. "Chemical Analysis of the Environmental Objects," red. Malakhov. Novosibirsk, Nauka, pp. 127-134(1991).
AR2	Riegner D.E., <i>et al.</i> , "Qualitative Evaluation of Field Ion Spectrometry for Chemical Warfare Agent Detection," Proceedings of The ASMS Conference on Mass Spectrometry and Allied Topics, pages 473A-473B, (1997, June).
AS2	Carnahan, B., <i>et al.</i> , "Field Ion Spectrometry - A New Analytical Technology for Trace Gas Analysis," <i>ISA</i> , 51(1):87-96, (1996).
AT2	Carnahan, B., <i>et al.</i> , "Field Ion Spectrometry - A New Technology for Cocaine and Heroin Detection," <i>SPIE</i> , 2937:106-119, (1997).
AU2	Miller, R.A., <i>et al.</i> , "A Novel Micromachined High-Field Asymmetric Waverform-Ion Mobility Spectrometer," <i>Sensors and Actuators B</i> , B67(3):300-306, (2000).
AV2	Barnett, D.A., <i>et al.</i> , "Isotope Separation Using High-Field Asymmetric Waverform Ion Mobility Spectrometry," <i>Nuclear Instruments & Methods in Physics Research</i> , 450(1):179-185, (2000).
AW2	Guevremont, R., <i>et al.</i> , "Calculation of Ion Mobilities From Electrospray Ionization High-Field Asymmetric Waveform Ion Mobility Spectrometry Mass Spectrometry," <i>Journal of Chemical Physics</i> , 114(23):10270-10277, (2001).

RECEIVED
 JAN 22 2004
 TECHNOLOGY CENTER

EXAMINER	DATE CONSIDERED
----------	-----------------

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 3239.1000-017		APPLICATION NO. 10/082,803	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION January 15, 2004 (Use several sheets if necessary)		FIRST NAMED INVENTOR Raanan A. Miller		FILING DATE February 21, 2002	
		EXAMINER Paul M. Gurzo		CONFIRMATION NO. 4435	
				GROUP 2881	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AX2	Pilzecker, P., <i>et al.</i> , "On-Site Investigations of Fas Insulated Substations Using Ion Mobility Spectrometry for Remote Sensing of SF ₆ Decomposition," <i>IEEE</i> , pp. 400-403, (2000).
AY2	Krylov, E.V., "Pulses of Special Shapes Formed on a Capacitive Load," <i>Instruments and Experimental Techniques</i> , 40(5):628, (1197). Also cited in Database Nauka/Interperiodika 'Online!', International Academic Publishing Company (IAPC), Russia; E. Krylov
AZ2	Burykov, I.A., <i>et al.</i> , <i>Device and Method For Gas Electrophoresis, Chemical Analysis of Environment</i> , edit. Prof. V. V. Malakhov, Novosibirsk: Nauka, (1991) pp. 113-127.
AR3	Raizer, Y. P., <i>et al.</i> , <i>Radio-Frequency Capacitive Discharges</i> , CRC Press, pp. 1-3, (1995).
AS3	"A Micromachined Field Driven Radio Frequency-Ion Mobility Spectrometer for Trace Level Chemical Detection," A Draper Laboratory Proposal Against the "Advanced Cross-Enterprise Technology Development for NASA Missions," Solicitation, NASA NRA 99-OSS-05.
AT3	Javahery, G., <i>et al.</i> , "A Segmented Radiofrequency-Only Quadrupole Collision Cell for Measurements of Ion Collision Cross Section on a Triple Quadrupole Mass Spectrometer," <i>J. Am. Soc. Mass. Spectrom.</i> 8:697-702 (1997).

RECEIVED
 JAN 22 2004
 TECHNOLOGY CENTER 2800

EXAMINER	DATE CONSIDERED
----------	-----------------